



THE MOST ADVANCED NAME IN DRAINAGE SYSTEMS



**RE: TESTING OF (3) SAMPLES MUNCY 900 MM (36") DIAMETER  
SMOOTHWALL TYPE 'S' POLYETHYLENE PIPE TO AASHTO M294M-  
04 FOR THE ESC PROGRAM**

CONDITIONING: Not less than 40 hours at  $23 \pm 2^{\circ} \text{C}$  ( $73^{\circ} \text{F}$ )

TEST RESULTS:

**SECTION 6.1 BASIC MATERIALS**

Results:

Sample	DENSITY (g/cm <sup>3</sup> )	MELT INDEX (g/10 minutes)	CARBON
ADS	.950	.23	2.30%
TRI	.949	.24	2.14%

SPECIFICATION: Minimum Cell Class 335400C and SP-NCTL 15% 24hours  
Density .945 to .955 g/cm<sup>3</sup>  
Melt index .15 to .40 g/10 min.  
Carbon Black Content 2% minimum / 5% Maximum  
\*Compounds that have a higher cell classification in one or more properties with the exception of density are acceptable provided product requirements are met.

CONCLUSIONS: Specification is met.

**SECTION 7.1 WORKMANSHIP**

SAMPLE	RESULTS
ADS	Pass
TRI	Pass

SPECIFICATION: Free of foreign inclusions and visible defects. Inner liner shall be fused to outer corrugated wall at all internal corrugation crests.

CONCLUSIONS: Specification is met.

**SECTION 7.2 PIPE DIMENSIONS**  
**SECTION 7.2.2 WALL THICKNESS**

SAMPLE	Inner Wall Thickness
Production	0.092"
TRI	0.100"

SPECIFICATION : The minimum inner wall thickness requirement is 1.7mm  
0.067"

CONCLUSIONS: Specification is met.

**SECTION 7.2.3 INSIDE DIAMETER**

Sample	INSIDE DIAMETER
ADS	35.84"
TRI	35.50"

SPECIFICATION: Nominal inside diameter shall not exceed 4.5% oversize or  
1.5% undersize and not more than 30mm oversize. 886.5 mm / 929.8 mm  
(34.90" / 36.61")

CONCLUSIONS: Specification is met.

**SECTION 7.4 PIPE STIFFNESS**

Sample	Orientation	Pipe Stiffness
ADS	0 / 45 / 90	28 / 28 / 27
TRI	0 / 45 / 90	26 / 26 / 26

SPECIFICATION: Minimum pipe stiffness requirement at 5% deflection is  
150kPa (22PSI)

CONCLUSIONS: Specification is met.

### **SECTION 7.5 PIPE FLATTENING**

Sample	Results
ADS	Pass
TRI	Pass

SPECIFICATIONS: No evidence of buckling, cracking, splitting or delamination.  
when the vertical inside diameter is reduced by 20%.

CONCLUSIONS: Specification is met.

### **Section 7.6 ENVIRONMENTAL STRESS CRACKING**

Sample	Results
ADS	Pass
TRI	Pass

SPECIFICATIONS: There shall be no cracking of the pipe.

CONCLUSIONS: Specification is met.

### **SECTION 7.7 BRITTLENESS**

Sample	Results
ADS	Pass
TRI	Pass

SPECIFICATION: The pipe specimens shall not crack or split.  
Five non-failures out of six impacts will be acceptable.

CONCLUSIONS: Specification is met.

### **SECTION 7.8 FITTING REQUIREMENTS**

Sample	Results
ADS	Pass
TRI	Pass

SPECIFICATIONS: Pipe connections shall not separate to create a gap exceeding 5mm. (0.197") when measured between the bell and spigot portions of pipe fittings shall not crack or delaminate.

CONCLUSIONS: Specification is met.

### **SECTION 11 MARKING**

Sample	MFG	SIZE	PLANT CODE	PRODUCTION DATE
ADS	ADS	36" 900mm	47 (Muncy)	03/29/06
TRI	ADS	36" 900mm	47 (Muncy)	03/29/06

SPECIFICATION: Pipe and fitting shall be marked at intervals not more than 3.5m, manufacture's name or trademark, nominal size, AASHTO M294, plant code and date of manufacture of appropriate code.

CONCLUSIONS: Specification is met.

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